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Abstract

In 1965, the legislature of the State of Missouri enacted a bill which provided for the establishment of upper-division programs at the Jasper County (Missouri Southern) and St. Joseph (Missouri Western) Junior Colleges. Under the same bill, the Board of Curators of Missouri University was charged with setting standards to determine the adequacy of a 4-year state college at either or both locations and the sufficiency of enrollment trends to justify its operation. The standards proposed in this report are (1) upper-division enrollments of at least 1,200 full-time students as part of a total student enrollment of 3,000, and (2) campuses --including land, buildings, and equipment-- costing at least $12 million. The justifications for these standards are discussed, based on per-student costs and high-quality instruction; tuition charges and enrollment trends; what the curricula of 4-year colleges are expected to offer; construction costs as they relate to projected student costs, and long-range planning for higher education in Missouri. Since the level of student enrollments and available funds at Missouri Southern is closer to that set by the proposed standards, it is recommended that an upper-division program be established there when its lower-division full-time student enrollment reaches 1,800, or between 1967 and 1970. Expansion of the junior college program is proposed for Missouri Western and, when enrollments reach 1,800, a re-study of the need for upper-division programs. (WM)

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Standards for Upper-Division Colleges With Special Reference to Joplin and St. Joseph, Missouri

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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By
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February, 1966

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This report is prepared at the request of President Elmer Ellis, Missouri University. The author has taught Political Science at Illinois State University at Normal and at the University of Illinois. He served ten years as Executive Officer of the Illinois Board of Governors of State Colleges and Universities, and was Acting President of Western Illinois University. He recently retired as Executive Director of the Illinois Board of Higher Education.

He has been a consultant on higher education to the state of Michigan and the state of Virginia and a member of the Higher Education Committee of the Midwest Council of State Governments.

The contents of this report are solely the responsibility of the author. No one, in Missouri or elsewhere, sought in any manner to influence his recommendations.

Richard G. Browne

Legislative Action

The legislature of the State of Missouri enacted, in 1965, House Bill 210 which provided for the establishment of upper-division state colleges in Jasper County, (Joplin), and at St. Joseph. These upper-division (third and fourth year) colleges would be closely related to the existing junior colleges in the two communities, the Jasper County Junior College, (now known as Missouri Southern), and the Missouri Western Junior College (St. Joseph).

The statute provided for appointment by the governor of a board of regents for each of these new state colleges and this action has been taken. These boards of regents "shall be resporsible for the administration" of both the upper-division state college, when established and the junior college as well. The state would provide funds to operate the senior college, (upper-division), while the local junior college districts would provide all funds needed to operate the junior college and the costs for all capital improvements for both the junior and senior college. The local junior college districts is required to levy a tax within the district "which, together with state aid provided for junior colleges and funds available from any other sources," (student tuition, federal grants, contributions, etc.), will meet its statutory obligations.

This is an interesting arrangement, probably unique in higher education. Its success or failure will be important beyo d the boundaries of Missouri.

The statute further provides that the two senior, (state), colleges are to be established in 1967, "or at such a time as the present (junior college district) has acquired a campus for a third and fourth year college which meets the requirements established by the Board of Curators of Missouri University and its enrollment trends constitute sufficient justification for the operation of a four year college in the opinion of the board, whichever occurs later. . . "

Resporsibility of Board of Curators of Missouri University.

The statute places upon the Board of Curators of Missouri University the duty of setting standards in order to determine (a) the adecuacy of the serior college campus, and (b) the sufficiency of "enrollment trends" to justify a four year college operation.

It is to assist the Board of Curators in performing this responsibility that the services of this consultant were sought. This report is offered to the Board of Curators in the hope that it will assist it in meeting its responsibility under the statute.

The general Counsel of Missouri University has informed the consultant that "the Board has construed these statutes, (Sections 174.230 and 174.250 Revised Statutes of Missouri), to require it to approve the campus selected by the State College Board and also to make a determination that enrollment trends of the college corstitute sufficient justification for operation of the four-year college. As the Board corstrues this statute, it is not the Board's duty to select the campus, but merely to determine that the campus submitted to the Board for approval meets the qualifications which the Board may determine

are required and necessary for the establishment of the college. It is our belief that it is the duty of the College Board to present to the Board of Curators evidence on which it may make a determination as to whether there is at the time sufficient justification for the operation of the four year college."

The above interpretation, which appears to be correct, seems to place on the respective State College Boards of Missouri Southern and Missouri Western the burden of proof. It is for each of them to select a site and construct a campus and submit the description of the same to the Board of Curators for approval. In the same fashion, the respective State College Boards, at the appropriate time, need to "present evidence" to the Board of Curators that the enrollment provides sufficient justification for the operation of a four-year college. The consultant understands that both of the State College Boards expect to present such information. Their administrators have supplied a great deal of it, in preliminary form, to the consultant for his use in this report.

Procedure in Preparing this Report

It was deemed advisable that the consultant see firsthand the institutions most closely concerned with this report. Therefore he conferred with the administrative staff of Missouri Southern at Jefferson City and later at Joplin, and the administrative staff of Missouri Western at Columbia and also at St. Joseph. He visited both Joplin and St. Joseph and examined the proposed campus sites of both colleges. He also visited the administrators of Southwest Missouri State College at Springfield and the Northwest Missouri State College

at Maryville. He also conferred with the staff of the Missouri Commission on Higher Education at Jefferson City. In all, he conferred with some two dozen officials concerned with higher education in Missouri. Without exception, these persons gave him complete cooperation and willing assistance.

In addition, the various college and university officers provided the consultant with a large volume of useful data, including some comprehensive studies listed in the appendix to this report. A number of special statistical tables were prepared at the request of the consultant. Such assistance contributed substantially to the preparation of this report. However, it should be made clear that the consultant himself is solely responsible for these recommendations. No person, in Missouri or elsewhere, sought to influence his conclusions.

Development of Suggested Standards

As stated above, the 1965 legislation created a unique opportunity to examine the factors that are relevant to the implementation of the decisions which the statute set forth. It is clear that the legislature did, in fact, establish upper-division colleges at the two locations provided that the two communities assumed the specific obligations of the law. However, the statute also provided that the new colleges would not actually operate until 1967 or at a later date subject to the judgment of the Board of Curators of Missouri University.

The Board of Curators, of course, would act in an objective fashion upon the basis of relatively specific standards. What should these standards contain?

In order to answer this query, the consultant believes it wise (1) to state clearly certain basic assumptions, (2) to point out the relationship of size to cost, (3) to set up a "Model" of a program of acceptable quality and scope, (4) to analyze the capital needs for projected enrollments, and (5) to relate the above to Missouri's long-range development of higher education. Each of these topics is discussed below. In addition, the proposed standards are applied specifically to the aspirations of the two institutions.

1. Basic Assumptions

Unhappily there is no definitive research that fixes the optimum, (or the minimum or maximum), size of an undergraduate student body. There are accredited four-year institutions, including some in Missouri, usually privately-supported, with fewer than 1,000 full-time undergraduate students. One can generalize safely that such institutions can maintain high quality instruction only at a high cost per student, or by offering a very narrow program, or both. This leads to the following basic assumptions:

a. Missouri does not wish to maintain state colleges of inferior quality.

b. Missouri does not wish to subsidize college programs that are excessively costly and demonstrably inefficient.

c. Missouri wishes to take steps which are consistent with the long-range goal of providing higher education of good quality for an increasing number of her citizens.

The first of these assumptions is so evident as to require no discussion. Attention is now devoted to the second and third.

2. Relationship of Size to Cost.

There is no doubt that it is extremely costly to provide higher education in a college with a very small enrollment. Instructional costs, chiefly faculty salaries, constitute a goodly share of college experditures. If class sizes are small, that is if the student-faculty ratio is low, it is certain that costs per student will be high. Further there are certain costs that are relatively fixed and increase less rapidly than instructional costs as enrollments rise. Among these are administrative costs, (up to a certain point), library costs, and the maintenance and operation of physical plant. Thus increases in enrollment automatically lower the costs per student.

There are some students of higher education who believe the economies of larger enrollments tend to disappear at some point, perhaps when undergraduate enrollments reach 15,000 students. At some such point a reverse trend appears. The consultant believe that there is validity to this view but only when allowance is made for variations in programs. A large, complex university may have high per student costs, not necessarily because it is large, but also because it offers specialized programs of inherently high cost or low enrollments.

An extensive study of per student costs was made in California in developing its "Master Plan."[1] These studies demonstrate that small institutions have abnormally high costs. Table 1 has been developed from data given on pages 38 and 41 of the California cost study. The authors of this report pointed out that these figures "give no evidence of the quality of instruction." However, one can safely generalize that the high cost institutions listed are not those of the highest quality. Their costs are high because they are small.

[1] The Costs of Higher Education in California; 1960-1975, Berkeley, 1960.

Specifically, four institutions, each with fewer than 3,000 students had teaching expense ranging from $1,208 to $3,884 per student. (Total operating costs, including operation and maintenance of physical plant, administration, etc. were considerably higher). The other institutions had teaching expense ranging from $708 to $1,505 per student with none above $1,000 except in the complex universities at Berkeley and Los Angeles with their specialized, high-cost programs.

TABLE 1

State of California

Institutional Teaching Expense(2) Per Full-Time Student, 1957-58

Institution	Student Credit(3) Hours	Teaching Expense Lower Division	Teaching Expense Upper Division
State Colleges			
Humboldt	40,446	$ 953	$ 1,770
Chico	81,462	680	1,208
Sacramento	101,278	747	942
Fresno	146,171	725	984
Long Beach	152,431	704	708
Los Angeles	187,108	---	717
San Francisco	108,180	744	851
San Diego	199,673	699	856
San Jose	290,486	672	921
Univ. of California			
Riverside	23,344	2,151	3,884
Santa Barbara	66,219	1,107	1,761
Los Angeles	359,631	765	1,136
Berkeley	470,894	848	1,505

(2) Teaching expense constitutes only a portion of the total operating cost per student.

(3) A full-time student generally carries 30-32 credit hours each year. Thus 3,000 F.T.E. students will take 90,000 student credit hours per year.

The figures given for California colleges include only "teaching expense", which constitutes only a portion of total cost. It should also be noted that the California dollar figures are for the 1956-58 school year. Comparable figures today would be substantially higher.

One may conclude that, in 1966 and after, it costs in excess of $2,000 per upper-division student to provide education of modest quality in institutions with fewer than 3,000 students. But programs of similar quality could be provided in larger institutions at a substantially lower cost.

It may also be noted that many colleges and universities, chiefly private, of good quality enroll fewer than 3,000 students. These institutions accept the inevitability of high costs per student. This is reflected in their tuition charges. It must be remembered that, in the nation as a whole, student tuition covers little more than half of total college expense. Yet numerous small colleges set tuition at $1200 or higher. Total costs per student in such institutions are in the $2,000 to $3,000 range.

Table 2 sets forth the tuition charges per student in a number of small colleges of good quality. All of the institutions listed are "not-for-profit" enterprises. All of them have income from endowments, contributions of alumni and friends, and many receive regular support from the religious denomination with which they are affiliated. Thus it is apparent that their costs per student are at least as high as those of the small California colleges listed in Table 1. Many of them are much higher.

Of course, some of the institutions listed in Table 2 are known to be of exceptionally high quality.

TABLE 2

Tuition Charges and Enrollments in Selected Colleges

College	Enrollment[4]	Tuition[5]
Allegheny	1,43°	$ 1,276
Amherst	1,134	1,500
Antioch	1,7°7	1,4C1
Bard	472	1,8°C
Barrard	1,550	1,550
Bates	84°	1,45C
Beloit	1,076	1,425
Berrington	361	3,450(6)
Bowdoin	832	1,750
Brandeis	1,4°1	1,650
Bryn Mawr	1,°28	1,550
Cal. Inst. Of Tech.	1,327	1,800
Carleton	1,349	2,250(6)
Chatham	5°4	1,240
Claremont Men's	573	1,320
Clark	2,328	1,500
Colby	1,300	1,450
Colgate	1,545	1,500
Connecticut College	1,548	2,550(6)
Cornell (Iowa)	918	1,230
Derison	1,565	1,250
De Pauw	2,260	1,550
Dickinson	1,245	1,425
Earlham	1,007	1,275
Elmira	1,937	1,430
Finch	300	2,°50
Franklin and Marshall	1,800	1,570
Gettysburg	1,808	1,300
Goddard	371	1,800
Goucher	1,016	1,248
Grinnell	1,°96	1,64C
Hamilton	793	1,400
Harvey Mudd	276	1,260
Haverford	4°7	1,610
Hobart	1,330	1,400
Hollins	6°C	1,600
Ithaca	2,160	1,400
Kenyon	650	1,400
Knox	1,225	2,450(6)
Lafayette	1,781	1,400
Lake Erie	°96	2,450(6)

(4) Data for Spring, 1°65, World Almanac, pp. 705-18.
(5) Most recent data available; generally for 1°62-63.
(6) Includes $700-°00 for room and board.

MacMurray	949	1,300
Middlebury	1,318	1,456
Mills (Calif.)	754	2,550(6)
Mills (N. Y.)	351	2,050
Mormouth (Ill.)	808	1,225
Mt. Holyoke	1,609	1,600
Muhlenberg	1,544	1,200
Natl. College of Educ.	857	1,300
Oberlin	2,514	1,550
Occidental	1,518	1,290
Ohio Wesleyan	2,101	1,500
Pomona	1,100	1,465
Principia	575	1,568
Randolph-Macon	819	2,400(6)
Radcliffe	1,170	1,760
Reed	963	1,500
Ripson	860	2,200(6)
Rollins	950	2,275(6)
St. Johns (Md.)	380	2,500(6)
St. Lawrence	1,587	1,500
St. Mary's (Ind.)	1,093	1,200
Sarah Lawrence	610	2,020
Scripps	346	2,300(6)
Simmons	1,646	1,300
Skidmore	1,341	2,550(6)
Smith	2,414	1,550
South, Univ. of the	755	1,250
Springfield (Mass.)	1,955	1,265
Stephens	1,761	2,750(6)
Swarthmore	955	1,875
Sweet Briar	694	2,740(6)
Trinity (Conn.)	1,463	1,550
Unior (N. Y.)	2,018	1,501
Vassar	1,580	2,850(6)
Wabash	812	1,200
Wagner	2,289	1,270
Washington & Jefferson	811	1,225
Wellesley	1,783	2,800(6)
Wesleyan (Conn.)	1,301	1,585
Western (Ohio)	485	1,400
Westminster (Mo.)	625	1,200
Wheaton (Mass.)	1,040	1,700
Williams	1,235	1,600
Wilson	570	2,500(6)
Wittenberg	2,095	1,339
Wooster	1,450	1,320
Worcester Poly. Inst.	1,489	1,600

(6) Includes $700-900 for room and board.

Their high costs per student are due both to this high quality, (as reflected in high faculty salaries for example), and to their small size. However, many of the institutions listed in Table 2 are of good but not exceptional quality. The high costs per student of this group must be due primarily to their small size. The fact is that instruction in a small college is abnormally costly.

Missouri now maintains 10 state colleges and universities. All of them except Lincoln University have enrollments in excess of 3,000. Upper-division enrollments exceed 1,200 in all except Lincoln, (683)[7] Northwest Missouri State College, (1,180)[7] and Missouri University at St. Louis (540)[7] The last named institution is of recent origin.

3. A "Model".

Quality in an undergraduate program grows out of many elements. Basic, of course, is the first-rate classroom teacher working with earnest, diligent students. Adequate and even beautiful, physical facilities may help although good education also occurs in stark surroundings. Libraries and laboratories are invaluable but the books and equipment are more important than the buildings.

But the student, by definition, is engaged in the pursuit of knowledge. His curriculum must provide both breadth and depth. The baccalaureate degree designates the completion of an orderly four-year program of studies. The state of Missouri has the right to expect that the graduates of any of its four-year colleges are ready for suitable employment or for further advanced study.

[7]Includes professional and special students.

Thus it is possible to design a "model" of what even the smallest four-year program should include. While most states, including Missouri, in earlier years established and maintained single-purpose teacher-training institutions, this pattern has been discarded in Missouri and elsewhere. Four-year colleges today are expected, at the very least, to offer curricula in the liberal arts and sciences, (generally leading to further advanced study), in teacher education, and in general business, (both leading directly to employment). So one may construct a "model" with at least the following undergraduate programs:

Fields of Study (majors, minors, & "service" courses)	No. of Semester Hours Needed at the Upper-Division Level
English	
English literature	30
General literature, speech, and journalism	30
Physical Science and Mathematics	
Chemistry	30
Physics	30
Mathematics	24
Geology	12
Biological Sciences	
Botany	30
Zoology	30
Social Sciences	
History - U.S.	30
World History	30
Geography	18
Government	18
Economics	18
Sociology and Anthropology	18
Teacher Education	
Elementary (incl. Psych.)	18
Secondary (incl. Phil.)	18
Business	
General	30
Secretarial	18
Fine Arts	24
Foreign Languages	48
	504

In this "model" it can be seen that academic majors leading to employment, (in teaching or in business), or to further advanced study, are offered in only a dozen fields. Most of these fields and most of the courses to support them must be offered if a defensible undergraduate program is to be provided.

If the 504 semester hours should be provided in 3 semester hour courses it would be necessary to provide 168 different courses, 84 for juniors and 84 for seniors. Some courses would require multiple sections. The students who major in history, for example, would certainly wish to enroll in some courses in English, in the other Social Sciences, in teacher education, and perhaps in Business. A fair estimate would suggest there would need to be some 64 full-time teaching faculty distributed among departments as follows:

English	8
Physical Science and Math	12
Biological Sciences	8
Social Sciences	16
Teacher Education	6
Business	6
Fine Arts	4
Foreign Languages	4

Such a faculty would be able to offer instruction, at the ratio of 20 students per teacher, to 1280 students. If there should be fewer students than this class size would be smaller and cost per student would be higher.

One might speculate the effect of lower enrollment and fewer faculty members by examining one section of the "Model". Suppose it is necessary to employ only half as many faculty because of a student enrollment only half as large, (640 students instead of 1280).

This would suggest 8, instead of 16, teachers for the Social Sciences. There might be one faculty member to teach all the aspects of Sociology and Anthropology, one for the whole spectrum of Economics courses, one for all of Political Science and Public Administration, one for all of Geography, and two each for U. S. History and the history of all other nations. Faculty competence would be irregular as schools were assigned to teach subjects and courses for which they have no preparation. Yet they would be instructing advanced, upper-division students. It would be impossible to insure quality in such circumstances. And the "model" assigns the Social Sciences the largest number of faculty. Other departments would have even greater handicaps.

It might be possible to offer some courses only in alternate years. This would effect some saving although it would create certain difficulties in scheduling. The "model" supports the standard of an enrollment of at least 1200 upper-division students to provide a modest program of acceptable quality at defensible cost.

It is recognized that many academicians would wish to revise the allocation of courses in the above "model". Many would wish to enlarge the offerings in certain fields and to broaden the scope of the entire program. Others would prefer adjustments within the total offerings suggested. There are few persons who would recommend lowering the total requirements unless they are willing to eliminate one or two of the three curricula listed; i.e. liberal arts and sciences, teacher education, general business. It should be noted that eliminating any one of these would inhibit enrollment and make it more difficult for the college to reach any enrollment standard. Furthermore a narrow program would be unwise in view of the explosion of knowledge that we are experiencing.

4. Capital Needs

The physical plant of a college is, of course, related to the enrollment. A college of 3,000 students needs a physical plant considerably larger than a college of 1,000. The campus also needs to be related to the kinds of courses and curricula to be offered. The library alone constitutes a sine qua non for instruction, and upper-division courses accentuate its importance. Each college can decide the necessities for certain marginal requirements--social and recreational buildings, sports facilities, student housing, parking lots, etc.

Extensive research and considerable experience is available on construction costs. California found that junior colleges could be constructed in 1958 at a cost of $3,200 per student while four-year state colleges cost $4,280 per student and the university costs were $7,400 per student. In each case the costs would be reduced somewhat as the size increased. Junior colleges with as many as 4,000 students would cost only $2,800 per student, state colleges with 10,000 students would average $4,050 each.

Illinois found that four-year colleges generally cost at least $5,000 per student in 1961 and the Illinois Master Plan (1964) suggested a general standard of $3,000 per student in the junior colleges and $5,000 per student in four-year institutions.

It should be noted that there has recently been a sharp upturn in construction costs. This means that the above averages are now too low. By 1967, it will be hazardous to count on building a four-year college at a cost, complete, of less than $5,400 per student.

5. Missouri's Long-Range Development in Higher Education.

The future of Missouri Southern and Missouri Western is connected with the future of the state's long-range development in higher education. At least three facets of this long-range development appear to be relevant to the immediate responsibility given the Board of Curators.

a. Coordinated Planning.

It has been found essential, in almost all of the states, to provide for long-range planning for public higher education. Such planning seeks to determine the role of the state universities and colleges, to recognize and strengthen the services of the private institutions of higher education; and to foster the proper development of locally-controlled community colleges.

Missouri has already established a planning and coordinating agency in the Commission on Higher Education. In the two years this body has been in existence it has already demonstrated its capacity to assume a major role in developing a long-range plan. Of course, it relies heavily on the assistance which it receives from the colleges and universities of the State.

It would be useful to all agencies, public and private, who are concerned with higher education in Missouri if reasonably specific guide-lines for future developments could be developed and generally approved by the legislature and the state executive authority. This would assume all localities and all educational agencies that decisions affecting them would be made as a result of competent professional consideration. Without these guide-lines it is unlikely that a coordinated, logical system of higher education will result. It is recommended that such guide-lires be developed under the leadership of the Commission on Higher Education.

b. Balanced Enrollments.

Most of the Missouri institutions do not have as many upper-division students as they would like.

Four-year colleges and universities throughout the nation are seeking to achieve a better balance between enrollment in the upper and lower divisions. Some have already done so. Traditionally four-year institutions experienced a substantial attrition, caused by academic failures and other reasons, so that the junior-senior classes were substantially smaller than the freshman-sophomore. Where the discrepancy was very great it was noted that the four-year institution was, in fact, performing, in an expensive and inadequate fashion, the role of a junior college.

The California Master Plan recommended that all the branches of the University system, and virtually all of the state colleges, plan to restrict lower division enrollments to fewer students than enroll in the upper-division. Over-all the Plan called for less than 40% of undergraduate students in the lower division with over 60% in the upper. California could achieve this because of its extensive net-work of junior colleges.

The state universities of Michigan also have sought to balance enrollment in the two divisions and the University of Michigan already enrolls more upper than lower division students.

The Illinois Master Plan, (1964) while less specific, contained a recommendation that the state colleges and universities "place increasing emphasis on upper-division and graduate level instruction and --- relatively less emphasis on programs at the lower division level." In 1965, the Illinois institutions reported these enrollments:

F.T.E. Students

Institution	Lower Division	Upper Division	% in Lower Division
U. of I.-Urbana	11,256	8,572	56.8
U. of I.-Chicago (8)	6,602	1,607	79.5
Southern-Carbondale	9,945	4,935	66.8
Southern-Edwardsville	3,305	1,477	69.7
Eastern	3,244	1,762	64.8
Illinois State	4,789	2,708	63.9
Northern	7,943	3,566	69.0
Western	4,270	1,543	73.4
Ill. Teachers-Chicago	2,400	1,901	55,8
	53,844	28,161	65.7

(8) Began upper-division work in 1965.

While the Illinois institutions are committed to working toward a better balance in enrollments than now exists, where 65.7% of the students are in the lower division, the Missouri Colleges and universities have not yet reached the position of those in Illinois. This is especially the case at Central Missouri State College, at Southwest Missouri State College, and at Southeast Missouri State College. The five former teachers colleges of Missouri could enroll 3,328 additional upper-division students if they were to achieve the balance already reached by the five former teachers colleges of Illinois.

It should also be noted that none of the Illinois institutions enrolls fewer than 1,200 upper-division students.

The 1965 figures for the Missouri colleges and universities are as follows:

F.T.E. Students(9)

Institution	Lower-division	Upper-division	% in Lower Division
MU-Columbia	6,402	3,141	67.4
MU-Kansas City	1,952	1,305	60.0
MU-St. Louis	2,601	274	84.0
MU-Rolla	303	154	71.9

Central	5,111	1,922	72.7
Southeast	3,754	1,332	73.8
Northeast	3,209	1,302	60.7
Southwest	3,529	1,338	72.5
Northwest	2,529	1,168	68.4
Lincoln	1,120	614	64.6
	30,780	12,640	71.2

It should be noted that large numbers of professional students enrolled in the branches of Missouri University are not included in these totals. Their inclusion would lower the proportion of lower division students at Missouri University in three of its locations.

In any case, the Missouri colleges and universities would benefit from larger upper-division enrollments. Such small class sections as exist for undergraduates are usually at this level. Part of this is due to the inherent necessity of offering a wider range of courses for advanced students. By the junior year many required courses have been completed and the students are scattered in courses needed to complete major and minor concentrations. Every reputable institution contains a variety of these.

Additional students at the junior-senior level can often be added without any addition to facilities or staff and with relatively minor experditures for other costs. Most of the Missouri institutions are in this circumstance, at least in some areas of instruction. It would be prudent to delay establishing any additional upper-division institutions until it is clear that they are, in fact, needed. This consideration supports the establishing of a relatively high standard for enrollment.

e. The Future of Junior Colleges.

There is also the consideration of the future of junior college

(9) Graduate, professional, special, and unclassified students are not included. These exclusions total 7,550 at MU-Columbia, 2,014 at MU-Kansas City, 266 at MU-St. Louis, 3,740 at Rolla, 393 at Central, 14 at Southeast, 210 at Northeast, 73 at Southwest, 12 at Northwest, and 60 at Lincoln.

education in Missouri. Missouri now supports nine public junior colleges. Except for the junior colleges serving St. Louis and Kansas City, the two at Joplin and at St. Joseph are the largest in the state. If, at some future time, they should lose their junior college status, this might have a most unfavorable impact on the establishment and maintenance of other junior colleges.

The legislation which creates, at some future date, the Missouri Western and the Missouri Southern State Colleges seeks to minimize this danger by providing for the continued operation of the two junior colleges after the upper-division state colleges are established. It would be desirable for this policy to be expressed so firmly as to remove any notion that the state would absorb the lower-division portion of the enterprise.

The purposes and programs of a junior college are quite different from those of the first two years of a four-year college.[10] The citizens who have established and maintained a comprehensive junior college would be badly served if they should be deprived of its benefits. Even the luxury of full state support would not compensate them for the educational losses they would suffer. A firm decision to preserve the unique advantages of a junior college is essential to avoid this danger.

Furthermore, what is the impact of the expansion of Missouri's four-year college system on other localities? There are large areas not presently served by any institution of public higher education. Ten of Missouri's twenty most populous counties now contain neither a public junior college nor a state college or university. Together these counties contain over 400,000 people. A public junior college has been recommended

[10]George L. Hall, Higher Education in Three Selected Areas of Missouri, 1964, p. 90.

for the five counties of the "bootheel."[11]

One may seriously doubt whether additional communities will vote to establish local community colleges, (partially supported by local taxation), if they believe the state might establish a fully state-supported college instead.

It is patently impossible to provide a four-year public college within easy commuting distance of every young person in the state. But many states believe that public community colleges can be provided to serve every person in the state who seeks some measure of post-high school education. Missouri might reach this goal if her citizens take advantage of the admirable Junior College Act of 1961. Proper guidance at the state and local levels is of great importance. Thus no action by the state should hamper the growth of the junior colleges.

Suggested Standards (for the Board of Curators)

The Board of Curators, as stated above, is required to determine the adequacy of the senior college campus constructed at Missouri Southern and at Missouri Western and also the sufficiency of enrollment trends to justify a four-year college at either or both locations. The consultant recommends a set of standards which would apply uniformly at both locations.

These are:

1. Upper-division enrollments of at least 1,200 full-time equivalent students as part of a total academic enrollment of at least 3,000.

2. Campuses, - land, buildings, and equipment - costing at least $12,000,000. The latter figure is arrived at by figuring the capital cost of $3,200 for each of the 1,800 lower-division students, $5,400 for each of

[11]George L. Hall, Higher Education in Three Selected Areas of Missouri, 1964, pp. 109-116.

1,200 upper-division students. These are very conservative cost figures.

Of course, the goal of 1,200 upper-division students would need to be fixed as the expected enrollment for the second or third year of operation. In such case the evidence to support the predicted enrollment should be conclusive beyond a reasonable doubt. Such evidence might include the achievment of 1,800 students in the lower-division transfer program with at least 700 students a year having completed a two-year college transfer course. This would appear necessary to indicate a potential enrollment of 1,200 in the upper-division.

Specific Application of Suggested Standards

If the standards described above are reasonable and proper, one may inquire as to when the Missouri Southern and the Missouri Western Colleges will reach these levels? It is clear that Missouri Southern is nearer than is Missouri Western.

Missouri Southern.

Missouri Southern has in sight some $3.5 million for its capital plant. It floated a $2.5 million bond issue. It has raised some $450,000 by contributions and some $300,000 by a building fund tax levy. It has also received a federal grant of $236,036 for part cost of a library building. It has purchased an adequate campus in a suitable location. Existing small buildings on the campus can be used temporarily for some educational purposes.

The full-time - equivalent enrollment at Missouri Southern last fall was 1,337. If the $3,200 per student figure is a proper one, the present capital funds available at Missouri Southern are almost adequate to provide a proper campus for its present junior college enrollment. Additional funds, totaling some $2.1 million, will be needed as the lower-division enrollment

climbs to the 1,800 standard. This should occur between 1967 and 1970. (Dr. Hall's study predicted an enrollment "by 1967-68" of "between 1,600 and 1,900 students."[12] The Jasper County Junior College Master Plan expects an enrollment of 2,053 in 1970.)[13]

The "Hall Study" recommended the establishment of a senior college by 1970. At that time there may be a potential upper-division enrollment of 1,200 students. Substantial growth would need to occur to reach this level. In 1965 only 148 students "graduated" from the two-year curriculum. There should be at least five times this number to assure a junior class of 660. (See above.)

The consultant commends the citizens of Jasper County for their service to higher education over a period of three decades. He recommends that they proceed to strengthen their junior college by providing good facilities, quality instructions, and a comprehensive program of studies for two years of post-high education. When their lower-division enrollment reaches 1,800 full-time students, and their graduates in college transfer programs exceed 700, it is urged that they take steps to provide capital facilities, costing at least $6.5 million additional, for the upper-division program. It is recommended that the Board of Curators of Missouri University and the state legislature at that time authorize the activation of the upper-division program.

Missouri Western.

Missouri Western would appear to be farther away from meeting reasonable standards for upper-division work. No capital funds are presently available, no bond issue has been voted, and no campus has yet been

[12] Ibid., p. 106.

[13] Page 3.

acquired. (However, a suitable site may be secured through purchase from the state of property now owned in St. Joseph). Student enrollment reached 953 full-time equivalent students last fall. In 1965 there were 119 students who graduated.

The enrollment projections by the college itself estimate a lower-division enrollment of 1,800 by 1970 and an upper-division total of 1,200 by 1974. Dr. Hall's predictions were more conservative. He believed the junior college in 1975 would enroll only 1,487.[14]

Missouri Western's situation is affected by its location, 43 miles from Northwest Missouri State College, and 53 miles from Kansas City, (Missouri University). Dr. Hall, in recommending against the creation of a four-year college there, pointed out this proximity. Actually, the Northwest Missouri State College operates bus transportation for St. Joseph students in attendance there. It would be clearly economical, and educationally sound, for the State of Missouri to subsidize the transporation of upper-division students to one or both of the near-by state colleges.

The consultant recommends that the Missouri Western College develop its junior college services by building, through a bond issue plus federal aid, a new campus and by expanding its junior college program to make it truly comprehensive. When this has been accomplished, and when the junior college enrollment has reached 1,800 students with at least 700 per year completing a two-year college transfer program, a restudy of the need for upper-division work might be made.

[14] Op. cit. p. 99.

Appendix

The consultant found the following documents most useful:

Missouri Commission on Higher Education

- First Biennial Report, November 1964
- Enrollments in Missouri Colleges and Universities, October, 1965
- Missouri College and University Enrollment Projections, 1965
- Distribution of Enrollments in Missouri Colleges and Universities by Student Classifications, Fall, 1965.

Missouri Southern College

- Catalog, 1965-66, 1965
- Master Plan for Jasper County Junior College, Feb. 1965
- Budget Justification Document, 1966-67, Fall, 1965.
- Report of the Registrar for 1964-65, Fall, 1965.

Missouri Western College

- Catalogue, 1965-66, 1965
- Projected Enrollments to 1985, 1965
- Major Academic Interests of Students Enrolled at Missouri Western Junior College, 1965.

General

- Missouri Public Junior College Handbook, 1964 Edition, State Department of Education
- Organized Occupational Education in Missouri Institutions of Higher Education, by K. A. Brunner, Aug. 1965
- Higher Education in Three Selected Areas of Missouri, by George L. Hall, November 1964.